



HERITAGE THERMAL SERVICES
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OHSAS 18001: 2007
ISO 14001: 2004
ISO 9001: 2008

January 31, 2014
VIA UPS and OEPA AIR SERVICES

Mr. George Czerniak, Chief (UPS)
U.S. EPA Region V
Air Enforcement and Compliance Assurance
Branch
Mail Code AE-17J
77 West Jackson
Chicago, IL 60604

Mr. Erik Bewley (Air Services)
OEPA-DAPC-NEDO
2110 E. Aurora Road
Twinsburg, OH 44087

RE: HERITAGE THERMAL SERVICES
SEMI-ANNUAL STARTUP, SHUTDOWN, AND MALFUNCTION REPORT &
SEMI-ANNUAL EXCESS EMISSIONS AND CMS REPORT

Greetings:

Please find enclosed a written report entitled *Semi-Annual Startup, Shutdown, and Malfunction Report* and *Semi-Annual Excess Emission and CMS Report* for Heritage Thermal Services. These reports are required by 40 CFR 63.10 and cover the time period of July 1, 2013 through December 31, 2013.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are certain penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

Thank you and if you have any questions or comments, please call me at the above number.

Sincerely,

A handwritten signature in dark ink, appearing to read "Stewart Fletcher", with a stylized flourish at the end.

Stewart Fletcher
General Manager
Heritage Thermal Services



Recycled Paper

**SEMI-ANNUAL STARTUP, SHUTDOWN, AND MALFUNCTION REPORT
&
SEMI-ANNUAL EXCESS EMISSION AND CMS REPORT**

For

Heritage Thermal Services

January 31, 2014

Section I – General Information

A. Facility Information

Facility ID:	02-15-02-0233
Responsible Official's Name / Title:	Stewart Fletcher General Manager
Street Address:	1250 Saint George Street
City:	East Liverpool
State:	Ohio
Zip Code:	43920
Facility Name:	Heritage Thermal Services
Facility Local Contact Name:	Vincent Waggle Environmental Engineer

B. Relevant standard(s) or other requirement(s) that is/are the basis for this report:

63.10(d)(5)(i) – Periodic Startup, Shutdown, and Malfunction Reports

C. Are you requesting a waiver of recordkeeping and/or reporting requirements under the applicable relevant standard(s) in conjunction with this report?

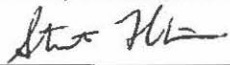
☐ Yes ☒ No

If you answered yes, you must submit the application for a waiver of recordkeeping and/or reporting requirements together with this report. The application for waiver should include whatever information you consider useful to convince the Administrator that a waiver of recordkeeping or recording is warranted. (63.10(f)(3))

Section II – Certification

Based upon information and belief formed after a reasonable inquiry, I as a responsible official of the above-mentioned facility, certify the information contained in this report is accurate and true to the best of my knowledge.

Stewart Fletcher, General Manager

Signature: 

Date: 1/30/14

Section III – Startup, Shutdown, and Malfunction Reports

A. Startup, Shutdown, or Malfunction Actions

All actions taken by Heritage Thermal Services during startup, shutdown, or malfunction events during the reporting period of **July 1, 2013 through December 31, 2013** were consistent with the procedures specified in the facility's Startup, Shutdown, and Malfunction Plan.

B. Malfunctions

Please find in the table below a list of each malfunction, the durations, and a brief description of the type of malfunction that occurred during the reporting period of **July 1, 2013 through December 31**.

See next page for completed table

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Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
THC	7/7/13 1:21	7/7/13 2:20	58.50	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.
THC	7/9/13 21:22	7/9/13 22:21	58.53	Malfunction Prior AWFCO	Poor combustion during WFCO caused THC event.	Restarted unit.
THC	7/12/13 12:58	7/12/13 13:57	58.57	Malfunction Lance Purge	Unexpected purge of direct drum lance caused THC.	Checked control valve. Restarted unit.
SCC Pressure Using Seals	7/13/13 12:59	7/13/13 13:00	1.03	Malfunction Clinker Fell	Very large ash fall caused duct damage and shutdown.	Immediate shutdown. Repair duct.
THC	7/13/13 13:03	7/13/13 14:03	59.57	Shutdown Prior WFCO	Very large ash fall caused duct damage and shutdown.	Immediate shutdown. Repair duct.
SCC Temperature	7/13/13 13:07	7/13/13 15:57	169.39	Shutdown Prior WFCO	Very large ash fall caused duct damage and shutdown.	Immediate shutdown. Repair duct.
Kiln Temperature	7/13/13 13:18	7/13/13 15:57	158.46	Shutdown Prior WFCO	Very large ash fall caused duct damage and shutdown.	Immediate shutdown. Repair duct.
Process Gas Flow	7/13/13 14:02	7/13/13 15:57	114.49	Shutdown Prior WFCO	Very large ash fall caused duct damage and shutdown.	Immediate shutdown. Repair duct.
THC	7/13/13 14:25	7/13/13 14:57	31.35	Shutdown Prior WFCO	Very large ash fall caused duct damage and shutdown.	Immediate shutdown. Repair duct.
Scrubber ECIS Pressure	7/13/13 14:25	7/13/13 15:57	91.36	Shutdown Prior WFCO	Very large ash fall caused duct damage and shutdown.	Immediate shutdown. Repair duct.

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Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
SDA ECIS Flow	8/1/13 21:19	8/1/13 21:51	31.58	Malfunction ECIS Screw	Glitch in PLC shutdown carbon feed screw.	Reset controller. Restarted unit.
THC	8/2/13 2:16	8/2/13 2:19	3.02	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.
THC	8/7/13 9:59	8/7/13 10:56	56.52	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.
THC	8/11/13 8:48	8/11/13 9:46	57.57	Malfunction Lance Purge	Unexpected purge of direct drum lance caused THC.	Cleared lance. Restarted unit.
THC	8/15/13 19:32	8/15/13 20:19	47.01	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.
Scrubber pH	8/17/13 4:19	8/17/13 4:41	22.41	Malfunction Caustic Pump	Caustic pump failure caused pH rise in scrubber.	Started second pump. Replaced seal.
Scrubber pH	8/17/13 4:50	8/17/13 5:34	43.56	Malfunction Caustic Pump	Caustic pump failure caused pH rise in scrubber.	Started second pump. Replaced seal.
THC	8/25/13 1:11	8/25/13 2:11	59.57	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.
THC	8/26/13 5:14	8/26/13 6:15	60.27	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.

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Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
RJ DP	8/30/13 15:10	8/30/13 16:08	57.50	Malfunction Instrument	Boiler level switch malfunction caused ID fan shutdown.	Repaired switch. Restarted unit.
RJ DP	8/30/13 16:32	8/30/13 17:17	44.58	Malfunction Instrument	Boiler level switch malfunction caused ID fan shutdown.	Repaired switch. Restarted unit.
SDA ECIS Flow	9/5/13 2:11	9/5/13 2:20	9.06	Malfunction ECIS Belt	Broken belt on ECIS blower caused carbon flow loss.	Replaced belt. Restarted unit. WO#133602
THC	9/12/13 2:16	9/12/13 3:16	59.55	Malfunction Lance Plugging	Plugging in lance caused unexpected purge resulting in poor combustion.	Cleared lance. Restarted unit.
THC	9/18/13 14:06	9/18/13 15:06	60.22	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.
RJ DP	9/22/13 16:55	9/22/13 17:53	58.21	Malfunction Instrument	Instrument malfunction caused loss of system fans.	Stabilized ESP and restarted unit.
SCC Temperature	9/24/13 6:38	9/24/13 7:54	75.58	Malfunction Instrument	Steam positioner valve went bad causing steam loss and shutdown.	Repaired positioner. Regained steam.
Kiln Temperature	9/24/13 7:00	9/24/13 7:35	35.11	Malfunction Instrument	Steam positioner valve went bad causing steam loss and shutdown.	Repaired positioner. Regained steam.

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Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
THC	9/25/13 17:03	9/25/13 17:12	8.58	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.
THC	9/30/13 2:56	9/30/13 3:30	34.00	Malfunction Instrument	Program logic failed on drum feed safeguard.	Restarted unit. Corrected logic.
THC	10/2/13 10:32	10/2/13 10:39	7.15	Malfunction Lance Purge	Plug and then purge of direct drum lance caused THC.	Cleared lance. Restarted unit.
THC	10/6/13 3:30	10/6/13 4:15	45.06	Malfunction Lance Purge	Plug and then purge of direct drum lance caused THC.	Cleared lance. Restarted unit.
Total PB Flow	10/8/13 12:03	10/8/13 13:06	63.16	Malfunction Scrubber Pump	Leaks on the 2nd stage scrubber pump caused flow loss.	Replaced elbows. Restarted unit. WO#133954
THC	10/9/13 1:40	10/9/13 2:21	40.16	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.
THC	10/13/13 19:40	10/13/13 19:53	12.55	Malfunction Lance Purge	Purge of sludge 2 lance caused poor combustion and THC.	Cleared line. Restarted unit.
THC	10/24/13 9:23	10/24/13 10:21	58.02	Malfunction Lance Purge	Unexpected lance purge caused combustion upset.	Cleared lance. Restarted unit.
THC	10/24/13 20:17	10/24/13 21:11	53.44	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to THC event.	Reviewed waste feeds. Restarted unit.

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Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
SCC Pressure Using Seals	10/30/13 12:56	10/30/13 12:56	0.30	Malfunction Clinker Fell	Clinker ash fell into quench cause slight seal pressure event	Maintained draft using ID Fan damper.
Lance Atomization	11/1/13 1:34	11/1/13 1:36	1.36	Malfunction Power Failure	Brief loss of power caused compressor shutdown and air loss.	Regained air pressure. Restarted unit.
SCC Temperature	11/1/13 1:43	11/1/13 2:11	28.10	Malfunction Prior AWFCO	Prior AWFCO caused lance shutdown and temp loss.	Regained lances and temp. Restarted unit.
THC	11/9/13 18:13	11/9/13 19:02	49.03	Malfunction Lance Purge	Purging of slurry lance caused poor combustion and THC.	Cleared lance. Restarted unit.
Scrubber ECIS Pressure	11/11/13 10:30	11/11/13 10:45	15.05	Malfunction ECIS Hose	Unit shutdown to repair ECIS hose.	Replace ECIS hoses. Restarted unit.
Scrubber ECIS Pressure	12/3/13 1:51	12/3/13 3:28	97.02	Malfunction ECIS Screw	Screw malfunction caused carbon flow loss	Repaired Screw. Restarted unit.
THC	12/6/13 12:53	12/6/13 13:48	54.54	Malfunction Lance Purge	Unexpected lance purge cause poor combustion and THC	Cleared lance. Restarted unit.
SCC Pressure Using Seals	12/9/13 22:48	12/9/13 22:48	0.28	Malfunction Combustion Anomaly	Unexpected and unpreventable combustion upset led to pressure spike.	Maintained draft using ID fan damper.
SCC Temperature	12/25/13 1:18	12/25/13 1:26	8.33	Malfunction Lance Plugging	Solid in high BTU lance caused loss of flow and temp.	Cleared lance. Restarted unit.
SDA ECIS Flow	12/30/13 19:13	12/30/13 19:43	30.25	Malfunction ECIS Screw	ECIS Screw plugged causing loss of flow.	Cleared screw. Restarted unit.

C. Startup, Shutdown, or Malfunction Plan Revision History

DATE	Revision Number	Comment
9/30/2003	0	Initial Plan
2/27/2004	1	ESP OPLs added. Malfunction list updated.
6/23/2005	2	Revised section on operating modes.
10/27/2006	3	RCRA Permit modifications. Malfunction list updated.
3/15/2007	4	Malfunction list updated and comments added addressing instances beyond the operator's control.
6/6/2007	5	Malfunction list updated and further comments added addressing instances beyond the operator's control.
10/16/2007	6	Corrected minor deficiencies noted by OEPA.
9/1/2008	7	Revised to reflect facility name change
6/12/2009	8	This revision included, in Section 1.6.3.1, more detailed descriptions of the most common malfunction events that occur at the facility. It also included a description of data collection procedures during times when residence time expires while an exceedance event is taking place in Section 1.6.3.
2/9/2011	9	Revision created to reflect OPL changes resulting from the MACT CPT completed in 2010. Additionally, new malfunctions were added to Table 2-2.
5/1/2011	10	Revision incorporated a discussion of the exceedance investigation process and procedures. Table 2-2 was also slightly revised to include addition malfunctions.
7/5/2012	11	Revision 11 (7/5/2012) created to improve language surrounding the reporting and documentation during startup and shutdown events.
10/15/2013	12	Revision 12 (10/15/2013) created to account for facility name change.

SEMI-ANNUAL EXCESS EMISSION AND CMS REPORT

Section I – General Information

A. Facility Information

Facility ID:	02-15-0233
Responsible Official's Name / Title:	Stewart Fletcher / General Manager
Street Address:	1250 Saint George Street
City:	East Liverpool
State:	Ohio
Zip Code:	43920
Facility Name:	Heritage Thermal Services
Facility Local Contact Name:	Vincent Waggle Environmental Engineer

B. Relevant standard(s) or other requirement(s) that is/are the basis for this report:

63.10(e)(3) – Excess Emissions and Continuous Monitoring System Performance Report

C. Are you requesting a waiver of recordkeeping and/or reporting requirements under the applicable relevant standard(s) in conjunction with this report?

☐ Yes ☒ No

If you answered yes, you must submit the application for a waiver of recordkeeping and/or reporting requirements together with this report. The application for waiver should include whatever information you consider useful to convince the Administrator that a waiver of recordkeeping or recording is warranted. (63.10(f)(3))

D. Check the box that corresponds to the reports you are submitting:

- ☐ Summary Report Only (Complete Sections II and IV)
- ☒ Excess Emission and CMS Performance Report and Summary Report (Complete Sections II, III, and IV).

Section II – Certification

Based upon information and belief formed after a reasonable inquiry, I as a responsible official of the above-mentioned facility, certify the information contained in this report is accurate and true to the best of my knowledge.

Stewart Fletcher, General Manager

Signature: 

Date: 1/30/14

Section III – Excess Emissions and CMS Performance Report

A. Excess Emissions

1. Have any excess emissions or exceedances of a parameter occurred during this reporting period?

☒ Yes ☐ No

2. If you answered yes, complete the following table for each period of excess emissions and/or parameter monitoring exceedances, as defined in the relevant standard(s), that occurred during periods other than startups, shutdowns, and/or malfunctions of your affected source. (63.10(c)(7)-(11))

See next page for completed table.

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Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
THC	7/1/13 5:07	7/1/13 6:06	58.55	Operator Error Feed Mix	Improper feed mix caused poor combustion and THC.	Reduced feeds. Restarted unit.
THC	7/5/13 22:14	7/5/13 23:13	59.24	Operator Error Feed Prep	Improper feed prep caused poor combustion and THC.	Reduced charges. Restarted unit.
THC	7/6/13 7:19	7/6/13 8:18	58.59	Operator Error Feed Prep	Improper feed prep caused poor combustion and THC.	Reduced charges. Restarted unit.
SCC Pressure Using Seals	7/9/13 21:18	7/9/13 21:18	0.28	Operator Error Poor Operation	Improper draft management caused loss of negative pressure.	Increase draft. Restart unit.
THC	7/12/13 14:33	7/12/13 15:32	58.57	Operator Error Poor Operation	Direct drum operator flushed lance too hard causing THC.	Restarted unit. Revised profile instructions.
THC	8/16/13 0:06	8/16/13 0:37	30.56	Operator Error Poor Operation	Operator charged waste during period of high THC causing exceedance.	Restarted unit.
THC	8/21/13 20:27	8/21/13 21:27	59.23	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Restart unit. Reduce charges.

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Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
THC	8/31/13 20:11	8/31/13 21:07	56.00	Operator Error Poor Inspection	Improper waste inspection led to poor combustion and THC.	Restarted unit. Reviewed procedures.
THC	9/5/13 13:33	9/5/13 14:31	57.48	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Restarted unit. Reduced charges.
THC	9/10/13 20:20	9/10/13 21:20	59.55	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Restarted unit. Reduced charges.
THC	9/17/13 1:13	9/17/13 1:43	30.02	Operator Error Low Air	Inadequate combustion air caused failure to control THC.	Operator increased air and restarted unit.
THC	9/23/13 21:05	9/23/13 22:04	58.53	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Restarted unit. Reduced charges.
THC	9/29/13 23:59	9/30/13 0:59	60.00	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Restarted unit. Retrained technicians.
THC	10/4/13 15:36	10/4/13 16:33	56.58	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Restarted unit. Reduced charges.

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Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
THC	10/14/13 20:29	10/14/13 21:28	58.53	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Restarted unit. Reduced charges.
THC	10/24/13 7:06	10/24/13 8:04	58.06	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Restarted unit. Reduced charges.
SCC Temperature	10/24/13 8:14	10/24/13 8:20	6.21	Operator Error Poor Operation	Operator failed to maintain temperature causing WFCO.	Regained temp. Restarted unit.
THC	11/15/13 22:56	11/15/13 23:54	57.31	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Reduced charge size. Restarted unit.
SCC Pressure Using Seals	11/19/13 1:14	11/19/13 1:15	0.30	Operator Error Feed Prep	Improper feed prep caused brief pressure spike.	Maintained draft using ID Fan damper.
THC	11/22/13 4:44	11/22/13 5:44	60.01	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Reduced charge size. Restarted unit.
THC	11/26/13 13:04	11/26/13 14:03	58.57	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Reduced charge size. Restarted unit.

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Name	Start Time	End Time	Duration	Cause (report)	Cause Description	Corrective Actions
SCC Pressure Using Seals	12/4/13 14:18	12/4/13 14:19	0.35	Operator Error Poor Operation	Operator Error caused unit shut down and OPL loss	Restarted unit. Re-trained operator
RJ DP	12/4/13 14:22	12/4/13 15:17	54.47	Operator Error Poor Operation	Operator Error caused unit shut down and OPL loss	Restarted unit. Re-trained operator
THC	12/4/13 16:09	12/4/13 17:03	54.02	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Reduced charge size. Restarted unit.
RJ Blowdown Flow	12/4/13 19:42	12/4/13 19:46	4.04	Operator Error Poor Operation	Poor operation during repairs led to OPL loss	Completed repairs. Restarted unit.
THC	12/14/13 9:07	12/14/13 10:07	59.24	Operator Error Feed Prep	Improper feed prep caused combustion upset and THC.	Reduced charge size. Restarted unit.

B. CMS Performance

1. Has a CMS been inoperative (except for zero/low-level and high-level checks), out of control (as defined in 63.8(c)(7)(i)), repaired, or adjusted during this reporting period? ☐ Yes ☒ No

2. If you answered yes, complete the following table for each period a CMS was out of control, repaired, or adjusted: (63.10(c)(5)-(6), (10)-(12); 63.8(c)(8).

CMS Type	Mfg	Process ID	Start Date	Completion Date	Nature & Cause of Malfunction (if any)	Corrective Actions Taken or Preventative Measures Adopted	Nature of Repairs or Adjustments Made to Inoperable or OOC CMS
THC	CAI	Stack monitor #2	9/5/2013	9/6/2013	Instrument Drift	Manual Calibration	Manual Calibration
Wet O2	Ametex	Stack monitor #2	10/2/2013	10/3/2013	Instrument Drift	Manual Calibration	Manual Calibration

3. Indicate the total process operating time during the reporting period. (63.10(c)(13))

Total process operating time (days):

Days in reporting period: 184

Facility total process operating time (days): 165.25

Total days on waste: 162.47

Total days on fuels: 2.78

Section IV – Summary Report – Gaseous and Opacity Excess Emissions and CMS Performance

A. Report Date and Submittal Reporting Period

Indicate the reporting period covered by this submittal and the date of this summary report.
(63.10(e)(3)(vi))

Reporting Period beginning date	Reporting Period ending date	Summary Report Date
July 1, 2013	December 31, 2013	January 31, 2014

B. Process Description and Monitoring Equipment Information

Complete the following process description and monitoring equipment information table for each affected source process unit:

Total operating time of affected source during the reporting period (days)
233,968 minutes of unit burning/ retaining hazardous waste; 3,999 minutes on virgin fuels.

Process unit name
Rotary Kiln Incineration System

Process unit description
Rotary kiln and ancillary equipment for combustion of hazardous wastes.

Emission and/or operating parameter limitations specified in the relevant standards
See Table 1 and 2 below.

TABLE 1 – APPLICABLE EMISSIONS STANDARDS

Emissions Parameter	Limit	Citation
Destruction and Removal Efficiency (DRE)	≥99.99%	40 CFR 63.1203(c)(1)
PCDDs/PCDFs	≤0.20 ng/dscm TEQ basis	40 CFR 63.1219(a)(1)(i)
HCl/Cl ₂	≤ 32 ppmv dry as HCl	40 CFR 63.1219(a)(6)
Mercury	≤ 130 µg/dscm	40 CFR 63.1219(a)(2)
Semi volatile Metals (SVM)	≤ 230 µg/dscm	40 CFR 63.1219(a)(3)
Low Volatile Metals (LVM)	≤ 92 µg/dscm	40 CFR 63.1219(a)(4)
Totals Hydrocarbons	≤ 10 ppmv	40 CFR 63.1219(a)(5)(ii)
Particulate Matter (PM)	≤ 0.013 gr/dscf or 34 mg/dscm	40 CFR 63.1219(a)(7)

TABLE 2 – OPERATING PARAMETERS

Process Parameter (Tag ID)	Units	Avg. Period	Basis	Limit
Minimum Feed Lance Atomization Pressure ¹	Psig	Instant.	Mfg. Rec.	30
Maximum SCC Pressure (PT-4307 & PT-4308)	In. w.c.	Reference September 4, 2003 letter from US EPA Region 5 concerning this requirement.		
Maximum Temperature at ESP Inlet (TI-6002A/B)	°F	1-hr	CPT	424
Maximum Pumpable Waste Feed Rate (WQI-9000T)	Lb/hr	1-hr	CPT	29,926
Maximum Total Waste Feed Rate (WQI-9000F)	Lb/hr	1-hr	CPT	35,069
Minimum Kiln Temperature (TI-4300A/B)	°F	1-hr	CPT	1,718
Minimum SCC Temperature (TI-4310A/B)	°F	1-hr	CPT	1,747
Maximum Process Gas Flow rate (FI-7510A/B)	Scfm	1-hr	CPT	67,505
Minimum Loc. 1 Carbon Feed Rate (WI-7003)	Lb/hr	1-hr	CPT	
Minimum Loc. 2 Carbon Feed Rate (WI-7002)	Lb/hr	1-hr	CPT	

¹ Each liquid lance has a pressure switch. When the pressure drops below 30 psig on any lance the feed from that lance will be automatically cutoff. Tag Ids : PSL-3113 (High BTU), PSL-3123 (Organic), PSL-3143 (Aqueous), PSL-3133 (Sludge), PSL-3153 (Slurry), and PSL-3100A/B (Sludge 2).

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Process Parameter (Tag ID)	Units	Avg. Period	Basis	Limit
Minimum Loc. 1 Carbon Feed Pressure (PI-5732)	Psig	1-hr	CPT	3.0
Minimum Loc. 2 Carbon Feed Pressure (PI-7132)	Psig	1-hr	CPT	3.0
Maximum Ash Feed Rate (WQI-9000AH)	Lb/hr	12-hr	CPT	10,333
Minimum Ring Jet Pressure Drop (DPI-7401)	in. w.c.	1-hr	CPT	28.0
Minimum Scrubber (1 st and 2 nd Packed Bed, combined) Liquid Flow Rate (FQI-7201)	gpm	1-hr	CPT	1,287
Minimum Scrubber (Ring Jet) Liquid Flow Rate (FI-7404A/B)	gpm	1-hr	CPT	446
Minimum Scrubber (Ring Jet) Blowdown (FI-7403)	gpm	1-hr	CPT	19.5
Minimum Scrubber (Ring Jet) Tank Level (LIC-7401)	feet	1-hr	CPT	1.7
ESP Parameters	The ESP is operating with all fields available with set points of 45,000 volts and 90 sparks per minute, each field; and minimum current of 100 milliamps, each field (see US EPA letters dated Dec. 10 and Dec. 27, 2003).			
Minimum Scrubber (1 st and 2 nd Packed Bed, combined) Feed Pressure	in. w.c.	1-hr	Mfg. Rec.	Not Req'd.
Minimum Scrubber (1 st and 2 nd Packed Bed) Pressure Drop	in. w.c.	1-hr	Mfg. Rec.	1.3
Minimum Scrubber (3 rd Stage) Liquid pH (AI-7307A/B)	pH units	1-hr	Prior Testing	7.6
Maximum Total Chlorine Feed Rate (WQI-9000CL)	Lb/hr	12-hr	Prior Testing	2,032
Maximum Total Semi volatile Metals Feed Rate (WQI-9000SV)	Lb/hr	12-hr	Prior Testing	83.2
Maximum Total Low Volatile Metals Feed Rate (WQI-9000LV)	Lb/hr	12-hr	Prior Testing	400
Maximum Total Pumpable Low Volatile Metals Feed Rate (WQI-9000PLV)	Lb/hr	12-hr	Prior Testing	400
Maximum Total Mercury Feed Rate (WQI-9000M)	lb/hr	12-hr	Prior Testing	0.14
Stack THC (AI-7850)	ppmv	1-hr	Regulatory Requirement	<10

Monitoring Equipment Information

Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Power -ESP Field #1	Environmental Elements Controller	0 – 500 ma	EI-6700	5/28/2013	N/A
Power -ESP Field #2	Environmental Elements Controller	0 – 500 ma	EI-6710	5/28/2013	N/A
Power -ESP Field #3	Environmental Elements Controller	0 – 750 ma	EI-6720	5/28/2013	N/A
Scrubber Second Packed Bed Liquid PH	Electro-Chemical Devices	0 – 14 pH units	AT-7307A	Performed Weekly	± 5% of range
Scrubber Second Packed Bed Liquid PH	Electro-Chemical Devices	0 – 14 pH units	AT-7307B	Performed Weekly	± 5% of range
Scrubber 2nd Packed Bed Differential Pressure	Rosemount Transmitter /Pressure transducer	0 – 8 in w.c.	DPT-7307	7/22/2013	± 2% of range
Pumpable Feed Rate High BTU Lance	Micromotion Mass Flow Meter	0 – 10,000 lb/hr	FT-3110	6/14/2013	± 10% of range
Pumpable Feed Rate Organic Lance	Micromotion Mass Flow Meter	0 – 10,000 lb/hr	FT-3120	6/13/2013	± 10% of range
Pumpable Feed Rate Sludge Lance	Positive displacement pump (calculation)	0 – 15,000 lb/hr	FT-3130	Not Applicable (calculation)	N/A
Pumpable Feed Rate Aqueous Lance	Micromotion Mass Flow Meter	0 – 10,000 lb/hr	FT-3140	6/13/2013	± 10% of range
Pumpable Feed Rate Slurry Lance	Positive displacement pump (calculation)	0 – 15,000 lb/hr	FT-3150	Not Applicable (calculation)	N/A
Scrubber First Packed bed flow rate	PolySonics Doppler Flow	0 – 1,500 gpm	FT-7204A	6/13/2013	± 10% of range

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Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Scrubber First Packed bed flow rate	Panametrics Ultrasonic Flow	0 – 1,500 gpm	FT-7204B	6/13/2013	± 10% of range
Scrubber Second Packed bed flow rate	PolySonics Doppler Flow	0 – 1,500 gpm	FT-7304A	6/13/2013	± 10% of range
Scrubber Second Packed bed flow rate	Panametrics Ultrasonic Flow	0 – 1,500 gpm	FT-7304B	6/13/2013	± 10% of range
Ring Jet Blow Down	Panametrics Ultrasonic Flow	0 – 500 gpm	FT-7403A	6/13/2013	± 10% of range
Ring Jet Blow Down	Panametrics Ultrasonic Flow	0 – 500 gpm	FT-7403B	6/13/2013	± 10% of range
Scrubber Ring Jet Liquid Flow Rate	Panametrics Ultrasonic Flow	0 – 1,500 gpm	FT-7404A	6/13/2013	± 10% of range
Scrubber Ring Jet Liquid Flow Rate	Panametrics Ultrasonic Flow	0 – 1,500 gpm	FT-7404B	6/13/2013	± 10% of range
Ring Jet Vessel Level	Rosemount Transmitter/ Pressure	0 – 5 feet	LT-7401A	7/22/2013	± 2% of range
Ring Jet Vessel Level	Rosemount Transmitter/ Pressure	0 – 5 feet	LT-7401B	7/22/2013	± 2% of range
Kiln Inlet Shroud (differential) Pressure (reference to SCC)	Rosemount Pressure transducer	0 - 10 in. w.c.	PDT-4305	7/18/2013	± 2% of range
Kiln Outlet Shroud (differential) Pressure (reference to SCC)	Rosemount Pressure transducer	0 - 10 in. w.c.	PDT-4306	7/18/2013	± 2% of range
Kiln Inlet Shroud Pressure (reference to ambient)	Rosemount Pressure transducer	0 - 10 in. w.c.	PT-4307	7/22/2013	± 2% of range
Scrubber 1st Packed Bed Differential Pressure	Rosemount Transmitter /Pressure transducer	0 – 8 in w.c.	PDT-7207	7/22/2013	± 2% of range

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Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Ring Jet Differential Pressure	Rosemount Transmitter/ Pressure	0 – 40 in w.c. (changed 2005)	PDT-7401A PDT-7405A	7/18/2013	± 2% of range
Ring Jet Differential Pressure	Rosemount Transmitter/ Pressure	0 – 40 in w.c. (changed 2005)	PDT-7401B PDT-7405B	7/17/2013	± 2% of range
Sludge 2 Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3100A	7/17/2013	± 5% of range
Sludge 2 Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3100B	7/17/2013	± 5% of range
High Btu Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3113	7/17/2013	± 5% of range
Organic Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3123	7/17/2013	± 5% of range
Sludge Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3133	7/17/2013	± 5% of range
Aqueous Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3143	7/17/2013	± 5% of range
Slurry Lance Atomizing Pressure	Generic pressure switch	0 – 50 psi	PSL-3153	7/17/2013	± 5% of range
Kiln / Secondary Combustion Chamber Pressure	Rosemount Transmitter / Pressure transducer	-3.5 - +2.5 in. w.c.	PT-4300A	WFCO Test done every 3 weeks	± 2% of range
Kiln / Secondary Combustion Chamber Pressure	Rosemount Transmitter / Pressure transducer	-3.5 - +2.5 in. w.c.	PT-4300B	WFCO Test done every 3 weeks	± 2% of range
Spray Dryer Carbon Carrier Fluid Pressure	Rosemount Transmitter / Pressure	0 – 15 psi	PT-5732	7/20/2013	± 2% of range
Scrubber Carbon Carrier Fluid Pressure	Rosemount Transmitter / Pressure	0 – 15 psi	PT-7132	7/20/2013	± 2% of range

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Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
ESP Inlet Temperature	Rosemount Transmitter / Thermocouple	0 - 600 °F	TT-6002A	WFCO Test done every 3 weeks	± 2% of range
ESP Inlet Temperature	Rosemount Transmitter / Thermocouple	0 - 600 °F	TT-6002B	WFCO Test done every 3 weeks	± 2% of range
Kiln Temperature	Land CD1 Thermometer	752 – 3272 °F	TT-4300A	3/14/2013	± 1% of range
Kiln Temperature	Land CD1 Thermometer	752 – 3272 °F	TT-4300B	8/23/2013	± 1% of range
Secondary Combustion Chamber Temperature	Land CD1 Thermometer	752 – 3272 °F	TT-4310A	7/22/2013	± 1% of range
Secondary Combustion Chamber Temperature	Land CD1 Thermometer	752 – 3272 °F	TT-4310B	2/20/2013	± 1% of range
Pumpable Feed Rate Direct Drum Scale A	Generic Load Cell (Loss in weight calculation)	0 – 5,000 lb	WT-3050	12/14/2013	± 3% of range
Pumpable Feeds Direct Drum Scale B	Generic Load Cell (Loss in weight calculation)	0 – 5,000 lb	WT-3055	12/14/2013	± 3% of range
Pumpable Feeds Tanker Scale A (South Bay)	Generic Load Cell. Loss in weight calculation	0 – 80,000 lb	WT-3060	12/14/2013	± 3% of range
Pumpable Feeds Tanker Scale B (East Bay)	Generic Load Cell. Loss in weight calculation	0 – 100,000 lb	WT-3065	12/14/2013	± 3% of range
Conveyor Scale Drum Processing	Generic Load Cell (Scale)	0 – 2,000 lb	WT-3070 ARTS Data	12/14/2013	± 3% of range
Splitting Scale Drum Processing	Generic Load Cell (Scale)	0 – 5,000 lb	WT-3075 ARTS Data	12/14/2013	± 3% of range
Floor Scale Drum Processing Lab Pack	Generic Load Cell (Scale)	0 – 2,000 lb	WT-3080 ARTS Data	12/14/2013	± 3% of range

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Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Kiln Bulk Feed Crane	Generic Load Cell (Scale)	0 – 10,000 lb	WT-3105	12/14/2013	± 3% of range
Scrubber Carbon Feed Rate	Generic Load Cell / Loss in Weight Feeder	0 – 50 lb/hr	WT-7002	12/14/2013	± 1% of range
Spray Dryer Carbon Feed Rate	Generic Load Cell / Loss in Weight Feeder	0 – 50 lb/hr	WT-7003	12/14/2013	± 1% of range
Total Hydrocarbon Analyzer (Stack)	California Analytical Instruments, Inc.	0 – 100 ppm 0 – 500 ppm as Propane	AI-7850A	11/21/2013	£ ± 5% of span
Total Hydrocarbon Analyzer (Stack)	California Analytical Instruments, Inc.	0 – 100 ppm 0 – 500 ppm as Propane	AI-7850B	11/21/2013	£ ± 5% of span
Stack Oxygen Analyzers (dry)	Ametek	0 – 25 %	AI-7860A	11/21/2013	± 1.0% Oxygen
Stack Oxygen Analyzers (dry)	Ametek	0 – 25 %	AI-7860B	11/21/2013	± 1.0% Oxygen
Stack Oxygen Analyzers (wet)	Ametek	0 – 25 %	AI-7865A	11/21/2013	± 1.0% Oxygen
Stack Oxygen Analyzers (wet)	Ametek	0 – 25 %	AI-7865B	11/21/2013	± 1.0% Oxygen
Flue Gas Flow Rate (Scrubber Outlet)	Calculation Stack - Reheat Flow	0 – 80,000 scfm	FT-7510A	11/21/2013	< 15% relative accuracy or < 7.5% of the applicable standard
Flue Gas Flow Rate (Scrubber Outlet)	United Sciences UltraSonic Gas Flow	0 – 80,000 scfm	FT-7510B	11/21/2013	< 15% relative accuracy or < 7.5% of the applicable standard
Flue Gas Flow Rate (Stack)	United Sciences UltraSonic Gas Flow	0 – 100,000 scfm	FT-7805A	11/21/2013	< 15% relative accuracy or < 7.5% of the applicable standard

Monitored Parameter	Instrument Description	Range and Units of Measurement	Tag Number	Last Calibration/Audit Date	Accuracy of Measurement
Flue Gas Flow Rate (Stack)	Calculation Process + Reheat Flow	0 – 100,000 scfm	FT-7805B	11/21/2013	< 15% relative accuracy or < 7.5% of the applicable standard

C. Emission Data Summary

Complete the following emission data summary table for each affected source:
(63.10(e)(3)(vi)(I))

Total duration of excess emission / parameter exceedances (minutes for opacity, hours for gases)

Excess Emissions	Total Duration(min)	Total Operating time of affected source during the reporting period (min)	% Of total source operating time during which excess emissions occurred
Maximum Ash Feed Rate (WQI-9000AH)	0	237,967	0.00%
Maximum Process Gas Flowrate (FI-7510A/B)	114.49	237,967	0.05%
Maximum Pumpable Waste Feed Rate (WQI-9000T)	0	237,967	0.00%
Maximum SCC Pressure (PI-4300A/B)	2.54	237,967	0.00%
Maximum Temperature at ESP Inlet (TI-6002A/B)	0	237,967	0.00%
Maximum Total Chlorine Feed Rate (WQI-9000CL)	0	237,967	0.00%
Maximum Total Low Volatile Metals Feed Rate (WQI-9000LV)	0	237,967	0.00%
Maximum Total Mercury Feed Rate (WQI-9000M)	0	237,967	0.00%
Maximum Total Pumpable Low Volatile Metals Feed Rate (WQI-9000PLV)	0	237,967	0.00%
Maximum Total Semi volatile Metals Feed Rate (WQI-9000SV)	0	237,967	0.00%
Maximum Total Waste Feed Rate (WQI-9000F)	0	237,967	0.00%
Minimum Feed Lance Atomization Pressure	1.36	237,967	0.00%
Minimum Kiln Temperature (TI-4300A/B)	193.57	237,967	0.08%
Minimum Loc. 1 Carbon Feed Pressure (PI-5732)	0	237,967	0.00%

Excess Emissions	Total Duration(min)	Total Operating time of affected source during the reporting period (min)	% Of total source operating time during which excess emissions occurred
Minimum Loc. 2 Carbon Feed Pressure (PI-7132)	203.43	237,967	0.09%
Minimum Loc. 1 Carbon Feed Rate (WI-7003)	70.89	237,967	0.03%
Minimum Loc. 2 Carbon Feed Rate (WI-7002)	0	237,967	0.00%
Minimum Ring Jet Pressure Drop (DPI-7401)	214.76	237,967	0.09%
Minimum SCC Temperature (TI-4310A/B)	287.61	237,967	0.12%
Minimum Scrubber (1 st and 2 nd Packed Bed) Pressure Drop	0	237,967	0.00%
Minimum Scrubber (1 st and 2 nd Packed Bed, combined) Liquid Flow Rate (FQI-7201)	63.16	237,967	0.03%
Minimum Scrubber (3 rd Stage) Liquid pH (AI-7307A/B)	65.97	237,967	0.03%
Minimum Scrubber (Ring Jet) Blowdown (FI-7403)	4.04	237,967	0.00%
Minimum Scrubber (Ring Jet) Liquid Flow Rate (FI-7404A/B)	0	237,967	0.00%
Minimum Scrubber (Ring Jet) Tank Level (LIC-7401)	0	237,967	0.00%
THC	2141.42	237,967	0.90%
ESP Controls	0	237,967	0.00%
Total Duration	3363.24	237,967	1.41 %

Summary of causes of excess emissions / parameter exceedances (% of total duration by cause):

TYPE	Sum Of Duration	% of Total Duration
Startup/shutdown	625.98	18.61%
Control Equipment Problems	625.4	18.60%
Process Problems	463.59	13.78%
Other unknown causes	387.35	11.52%
Other known causes	1260.92	37.49%
	3363.24	100.00%

D. CMS Performance Summary

Complete the following CMS performance summary table for each affected source:
(63.10(e)(3)(vi)(J))

Total duration of CMS downtime ¹
0 minutes

Total operating time of affected source during the reporting period
237,967 min

Percent of total source operating time during which CMS were down
0.00 %

¹ Heritage Thermal Services maintains redundant CMS equipment in most cases to prevent CMS downtime. There were no periods during this time that this redundancy did not prevent CMS downtime.

Summary of causes of CMS downtime (percent of downtime by cause)	Minutes
Monitoring equipment malfunctions	0
Non-monitoring equipment malfunctions	0
Quality assurance / quality control calibrations	0
Other known causes	0
Other unknown causes	0

E. CMS, Process, or Control Changes

- Have you made any changes in CMS, processes, or controls since the last reporting period?
☐ Yes ☒ No (if no, end of form) (63.10(2)(3)(vi)(K))
- If you answered yes, please describe the changes below:

END OF REPORT

bcc: Env. Dept
Stewart Fletcher
Bob Buchheit
Kevin Lloyd

file name: environ/MACT/HWC MACT/exceedances/semiannual2013b

ECF: 2013/MACT/ Semiannual B